in many cases they are changed by their own activity and are not destroyed by hot alcohol. The enzyme nature of hydrogenase, however, is not to be doubted. It performs its function by liberating nascent hydrogen which unites with the oxygen carried by the oxidase to form water or hydroxyl groups; the latter can be employed for the formation of metabolic products. By these formations the oxidation of other substances is prevented. "Reductase" is a *contradictio in adjecto*. "Catalase" is merely a term to designate the decomposition of H_2O_2, and its place in the category of enzymes is extremely hypothetical. Amylocoagulase is the anti-enzyme of diastase in the sense that its action is just the opposite of that of diastase. The coagulase may be entirely obscured by the action of diastase, but it cannot be reversed. Cytocoagulase is another synthetic enzyme which acts in opposition to cytase.

The chief value of the book lies in the mass of experimental details and the ingenious methods devised for the study of enzymes. It will find its greatest usefulness among those especially interested in enzymes, as the treatment is rather technical.—CHAS. O. APPLEMAN.

Field manual of trees

An addition to the already numerous tree manuals has come[5] in the form of a thin pocket volume, 4.5 by 7 inches, bound in flexible leather, making it particularly convenient for field use. It is designed to include all the native and many of the introduced species north of Virginia and Kentucky and east of the prairie region. The features which recommend this manual are the numerous keys, all of which appear to be accurate and rather simple. They include separate ones for the genera based on (1) summer condition, (2) winter condition, (3) flowers, and (4) fruit, as well as keys for species under each genus and a general classification of the wood of the trees. The descriptions of the species seem to be good, but it is certainly unfortunate that such well known trees as the black and choke cherry should appear under such scientific names as *Prunus virginiana* and *P. nana* respectively, and that the flowering dogwood should be removed from the genus *Cornus*. Whatever may be the arguments of the systematist for such a course, it is certainly likely to lead to confusion, especially in a manual where no synonyms are given. One also misses the illustrations which have been a prominent feature of many recent volumes on trees.—GEO. D. FULLER.

MINOR NOTICES

Botanical researches of the Carnegie Institution.—The annual report[6] for the past year gives an idea of the various lines of research completed and

[5] SCHAFFNER, JOHN H., Field manual of trees, including southern Canada and the northern United States to the southern boundary of Virginia, Kentucky, and Missouri, westward to the limits of the prairie. Columbus (Ohio): R. G. Adams & Co. 1914. 16mo. pp. 154. Cloth $1.25. Limp leather $1.75.

[6] MACDOUGAL, D. T., Annual report of the director of the department of botanical research. Carnegie Institution of Washington, Year Book No. 12 for 1913:57–87. 1914.